

What is claimed is:

1. A print control apparatus for inkjet printers, comprising:

an encoder sensor for outputting a first and a second signal every time a slit is  
5 detected;

a direction decision unit for determining a travel direction of a carriage having a  
printer head therein based on the first and the second signal output from the encoder  
sensor;

an edge detection unit for detecting rising and falling edges of the first and  
10 second signals;

a position counter for increasing and decreasing a counting value in relation to  
the direction determination signal and the edge detection signal; and

a control unit for moving the carriage to a predetermined reference position if  
the value counted by the position counter is equal to a predetermined reference position  
15 value, and outputting a print reference signal to the printer head, wherein the control  
unit outputs the print reference signal based on the same edge detected by the edge  
detection unit regardless of the travel direction of the carriage.

2. The print control apparatus as claimed in claim 1, further comprising:

20 a comparator for comparing the value counted by the position counter and the  
reference position value; and

a pulse generator for generating a pulse corresponding to the print reference  
signal according to controls of the control unit.

25 3. The print control apparatus as claimed in claim 1, wherein the position  
counter increases the counting value if the carriage is determined to be traveling from  
the first position to the second position as a result of the decision of the direction  
decision unit, and decreases the counting value if the carriage is determined to be  
traveling from the second position to the first position.

30 4. The print control apparatus as claimed in claim 3, wherein, if the print  
reference signal is output based on the rising edge of the first signal detected by the  
edge detection unit when the carriage travels from the first position to the second

position, the control unit controls the pulse generator to output the print reference signal based on the falling edge of the first signal when the carriage travels from the second position to the first position.

5           5. The print control apparatus as claimed in claim 3, wherein, if the print reference signal is output based on the falling edge of the first signal detected by the edge detection unit when the carriage travels from the first position to the second position, the control unit controls the pulse generator to output the print reference signal based on the rising edge of the first signal when the carriage travels from the second  
10 position to the first position.

          6. A control method for a print control apparatus, comprising steps of:  
          detecting rising and falling edges of first and second signals output from an encoder sensor every time a slit formed on an encoder strip is detected;  
15           determining a travel direction of a carriage having a printer head therein based on the first and the second signal output from the encoder sensor;  
          increasing and decreasing a counting value based on an edge detection signal and a signal indicating a travel direction of the carriage;  
          comparing the counted value and a predetermined reference position value; and  
20           moving the carriage to a predetermined reference position if the counted value is equal to the predetermined reference position value, and outputting a print reference signal to the printer head, wherein the print reference signal is output based on the same edge detected by the edge detection step regardless of the travel direction of the carriage.

25           7. The control method as claimed in claim 6, wherein the counting step comprising steps of:  
          increasing the counting value if the carriage is determined to be traveling from a first position to a second position; and  
30           decreasing the counting value if the carriage is decided to travel from the second position to the first position.

8. The control method as claimed in claim 7, wherein, if the print reference signal is output based on the rising edge of the first signal detected by the edge detection step when the carriage travels from the first position to the second position, the print reference signal output step outputs the print reference signal based on the falling edge of the first signal when the carriage travels from the second position to the first position.

9. The control method as claimed in claim 7, wherein, if the print reference signal is output based on the falling edge of the first signal detected by the edge detection step when the carriage travels from the first position to the second position, the print reference signal output step outputs the print reference signal based on the rising edge of the first signal when the carriage travels from the second position to the first position.

10. The print control apparatus as claimed in claim 1, wherein the encoder sensor is disposed at a position corresponding to an encoder strip having plural slits spaced in a predetermined interval.